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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/895,048	06/29/2001	Malena Rosa Mesarina	10010939	9310
22879	7590	06/21/2005	EXAMINER	
HEWLETT PACKARD COMPANY P O BOX 272400, 3404 E. HARMONY ROAD INTELLECTUAL PROPERTY ADMINISTRATION FORT COLLINS, CO 80527-2400			NAWAZ, ASAD M	
			ART UNIT	PAPER NUMBER
			2155	

DATE MAILED: 06/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/895,048

Applicant(s)

MESARINA ET AL.

Examiner

Asad M. Nawaz

Art Unit

2155

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 March 2005.
2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-32 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 29 June 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. This action is responsive to the amendment filed on March 25, 2005. Claims 1, 5-10, 14-19, 23-24, 26-28, and 32 have been amended. No new claims have been added. Claims 1-32 are pending.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4, 6-13, 15-22, and 24-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Manzak and Chankrabarti (*Variable Voltage Task Scheduling For Minimizing Energy Or Minimizing Power*) hereinafter referred to as Manzak, further in view of McFadden et al (US Patent No. 6,614,804) hereinafter referred to as McFadden.

As to claim 1, Manzak teaches a method for processing an encoded data stream wherein said encoded data stream is non-preemptive and subject to precedence constraints, said method comprising the steps of: assigning a processor setting to a task in a plurality of tasks, wherein said processor setting corresponds to a setting used by a processor of a client device to execute said task and wherein said task decodes without preemption a frame of said encoded data stream; (1, 1.1)

generating an execution schedule for decoding said encoded data stream, wherein said execution schedule comprises a sequence for executing at said client device said plurality of tasks according to said precedence constraints that fix the order for executing at least a subset of said tasks; (1, 2.2)

With regards to the limitation, "transmitting to said client device said execution schedule and said processor setting" in claim 1. Manzak does not explicitly indicate the transmission of the execution schedule to a client device.

McFadden teaches transmission download of data to clients wherein pre-download scheduling of one or more future download sessions is provided. A transmission link, low-volume scheduling information, or content are transmitted within designated streams dynamically allocated relative to high-volume, high-speed, and low-volume, low-speed demands. (Abstract; col 2 and 3, lines 57-67 and 1-25)

With respect to claim 1, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teachings of McFadden into those of Manzak to make the system efficient. A client provided with the scheduling data along with processing settings would enable the system to more efficiently fulfill the multimedia request.

As to claim 2, Manzan teaches the method as recited in claim 1 wherein said processor setting comprises a voltage amount used by said processor to execute said task. (1, 1.1)

As to claim 3, Manzak teaches the method as recited in claim 1 wherein said processor setting comprises a processor clock speed at which said processor executes said task. (1.2)

As to claim 4, Manzak teaches the method as recited in claim 1 wherein said processor of said client device operates using a discrete variable-voltage power supply. (Abstract; 1)

As to claim 6, Manzak teaches the method as recited in claim 1 comprising the steps of: assigning a processor setting to each task in said plurality of tasks. (1, 1.1)

However, with regards to the limitation "transmitting said processor setting for said each task to said client device" in claim 1, Manzak does not explicitly indicate the transmission of processor settings to the client device.

McFadden teaches transmission download of data to clients wherein pre-download scheduling of one or more future download sessions is provided. A transmission link, low-volume scheduling information, or content are transmitted within designated streams dynamically allocated relative to high-volume, high-speed, and low-volume, low-speed demands. (Abstract; col 2 and 3, lines 57-67 and 1-25)

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teachings of McFadden into those of Manzak to make the system efficient. A client provided with the scheduling data along with processing settings would enable the system to more efficiently fulfill the multimedia request.

As to claim 7, Manzak teaches the method as recited in claim 1 wherein said step of generating said execution schedule is independent of client device type.

(Abstract, 1)

As to claim 8, Manzak teaches the method as recited in claim 1 wherein said step of generating said execution schedule comprises: generating different sequences for executing a subset of said plurality of tasks and selecting a sequence that results in minimum energy use by said processor of said client device. (1, 2.2)

As to claim 9, Manzak teaches the method as recited in claim 1 comprising: transmitting said encoded data stream to said client device with said execution schedule and said processor setting. (1, 1.1, 1.2, 2.2)

3. Claims 5, 14, 23, and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Manzak and Chankrabarti (*Variable Voltage Task Scheduling For Minimizing Energy Or Minimizing Power*) hereinafter referred to as Manzak, further in view of McFadden et al (US Patent No. 6,614,804) hereinafter referred to as McFadden further in view of Kaiserswerth et al (USPN: 6195701).

As to claim 5, Manzak teaches the method as recited in claim 1 however does not explicitly indicate the encoded data stream comprising an audio portion and a video portion, said video portion comprising a first frame and a second frame wherein decoding of said first frame is dependent on decoding of said second frame.

Kaiserswerth et al disclose synchronizing and scheduling of multiple data streams in multimedia systems. Each stream includes an audio and video portion.

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Each stream may also be synchronized to one or multiple streams or time stamps.

Also, two or more data units can be related in time by trigger conditions. (col 2, lines 46-60; col 3, lines 10-36)

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teachings of Kaiserswerth et al into those of Manzak and McFadden to make the system reliably and efficient. In real time systems that deal with data streams that include text, still images, video, and/or sound, synchronization and scheduling are critical tasks. Synchronization and scheduling algorithms for data streams are also well known and expected in the art. (col 1; lines 29-45)

Claims 10-32 contain similar limitations and are thus rejected under similar rationale.

Response to Arguments

4. Applicant's arguments with respect to claims 1-4, 6-13, 15-22, and 24-31 have been fully considered but are not persuasive.

5. Applicant's arguments with respect to claim 5, 14, 23, and 32 have been considered but are moot in view of the new ground(s) of rejection.

6. In the remarks section, the applicant argues in substance that the scheduling priority, as disclosed in Manzak, is not determined using precedence constraints because Manzak only address the execution of independent tasks.

7. In response, Manzak does teach the execution of sets of dependant tasks. The cited paragraphs on pages 3240 and 3241 state, "[t]he results are graphically illustrated in Figure 1 for the case when there are three independent tasks...". As is apparent, this is a recitation of merely an example. Thus, Manzak still metes the scope of the limitations as claimed.

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

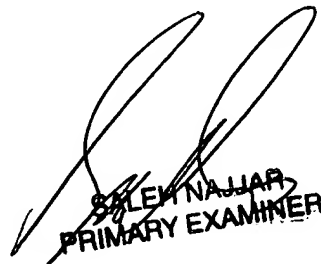
Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Asad M. Nawaz whose telephone number is (571) 272-3988. The examiner can normally be reached on M-F 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ario Etienne can be reached on (571) 272-4001. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


AMN


SALEH NAJJAR
PRIMARY EXAMINER